

April 30, 1990

Mr. F. Burnell Cordner  
Executive Secretary  
Utah Air Conservation Committee  
State of Utah  
Department of Health  
P. O. Box 16690  
Salt Lake City, Utah 84116-0690

Dear Mr. Cordner:

Intermountain Power Project (IPP)  
PM10 Monitoring Plan

Pursuant to your request, the enclosed report provides Chemical Mass Balance (CMB) analyses of various potential PM10 sources and of the filter sample from the June 20, 1988 PM10 episode in the vicinity of the Intermountain Generating Station (IGS). Our contractors for this work have been Dames & Moore, Desert Research Institute and NEA, Inc.

Specifically, eight potential PM10 sources were assessed utilizing the CMB model to determine the relationship between PM10 source constituents and the elemental composition of the ambient air particulate sample collected on June 20, 1988. The eight sources studied were:

- o soil dust;
- o coal dust;
- o limestone dust;
- o unpaved haul road dust;
- o paved road dust;
- o wood burning emissions;
- o vehicle emissions (diesel); and
- o vehicle emissions (unleaded).

Based upon the statistically based CMB modeling results, two dominant source types were identified as potential sources of the PM10 episode:

- o native soil dust; and,
- o residential woodburning.

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Since residential woodburning in the IGS area was unlikely a cause of significant PM10 impacts, the CMB analysis was conducted for a second scenario which excluded residential woodburning as a source. Again, native soil dust was identified as the major PM10 contributor. To further support this CMB modeling result, an additional laboratory analysis of the ambient air PM10 filter was performed to measure elemental and organic carbon. The analytical procedure indicated organic carbon in measurable quantities and elemental carbon below detection levels. This result is consistent with the existence of soil dust (characterized by organic matter) and absence of coal dust (characterized by elemental carbon) on the ambient air filter.

We hope this information is adequate to attribute the PM10 episode to native soil, thereby completing the final requirement of our ambient air quality monitoring program. We believe that the multi-year program has demonstrated that operation of the IGS does not result in any significant deterioration of air quality and that the ambient impacts are almost immeasurably small.

If you require any additional information, please have your staff call Ms. Jodean M. Igawa at (213) 481-8605 or our ambient air monitoring consultant, Mr. Thomas A. Umenhofer, at (805) 685-4415.

Sincerely,

ORIGINAL  
APPROVED  
by HSS

JOHN W. SCHUMANN

Manager of Research and Development

JMI:alg  
Enclosure

c: Messrs. David Prey, State of Utah, Department of Health  
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